Examining Mental Health Literacy and Dispositional Optimism Among Adolescent Students in Argao National High School

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ABSTRACT

This study examined the relationship between mental health literacy and dispositional optimism among adolescent students in Argao National High School.The research is fundamentally anchored on a multi-theoretical framework encompassing: Bronfenbrenner's Ecological Systems Theory (1979) to contextualize environmental influences on MHL; Keyes' Dual Continuum Model (2002) to provide a holistic view of well-being; Positive Psychology Theory (Seligman & Csikszentmihalyi, 2000) to frame Disposition Optimism as a personal strength; Carver and Scheier's Self-Regulation Theory (1981) to explain optimism's role in goal-directed behavior; and Bandura's Bidirectional Relationship Theory (1986) to highlight the reciprocal influence between MHL and DO.

Using a quantitative correlational design, the study examined the levels of mental health literacy and dispositional optimism among adolescents and determined whether significant differences existed when respondents were grouped according to sex. Standardized instruments were administered to measure both variables among the participants. Descriptive statistics, independent samples t test, and correlation analysis were used to analyze the collected data.

Findings revealed that female students demonstrated higher levels of mental health literacy compared to male students, indicating that sex influences awareness and understanding of mental health concepts. However, no significant difference was found in dispositional optimism between male and female students, suggesting that optimism tends to remain stable across genders. The overall correlation between mental health literacy and dispositional optimism was very weak and not statistically significant, suggesting that knowledge about mental health does not necessarily predict optimistic attitudes. Interestingly, a significant positive correlation was found among male students, implying that mental health literacy may play a more influential role in fostering optimism within this group.

These findings highlight the importance of implementing gender sensitive mental health interventions that strengthen mental health literacy among male students while sustaining high literacy among female students. Promoting dispositional optimism across both sexes may help foster emotional resilience, positive coping, and overall adolescent well being within the school environment.

Keywords: Mental health literacy, dispositional optimism, adolescents, sex differences

INTRODUCTION

Positive psychology studies emphasize the role of character strengths in promoting well-being and health outcomes (Friedman & Kern, 2014). One such strength was **dispositional optimism**, which was defined as a general tendency to expect positive future outcomes (Carver & Scheier, 2014). More than just a positive outlook, dispositional optimism influences how individuals process challenges, regulate emotions, and cope with stress. People with high dispositional optimism focus on positive aspects of situations, anticipate favorable results, and exhibit resilience in adversity (Carver et al., 2010). People with high dispositional optimism tend to focus on the positive aspects of situations, anticipate favorable results, and cope more effectively with stress (Gillham and Reivich, 2014).

Extensive research has linked the benefits of optimism across various domains. Higher levels of optimism are linked to longer life spans, better coping strategies, healthier behaviors, and reduced risks of physical illnesses and emotional distress, including anxiety and depression (Carver & Scheier, 2017; Lee et al., 2019; Schiavon et al., 2016). In the context of adolescent mental health, optimism has been shown to play a crucial protective role. A study by Nieto et al. (2022) highlights optimism as a predictor, mediator, and protector of mental health during adolescence. Furthermore, optimism contributes to both hedonic well-being enhancing positive emotions and life satisfaction and eudaimonic well-being promoting a sense of purpose and self-efficacy (Alarcon et al., 2013; Liu et al., 2022).

Another key determinant of adolescent well-being is **mental health literacy (MHL)**, which refers to an individual's knowledge and beliefs about mental health conditions, enabling recognition, management, and prevention (Jorm et al., 1997). It plays a crucial role in improving mental health outcomes by reducing stigma, promoting early intervention, and fostering positive psychological traits such as optimism (Hill, 2024; Asl et al., 2024). Studies showed that adolescents with greater MHL are more likely to recognize mental health issues in themselves and their peers, leading to early intervention (Hassen et al., 2024; Nazari et al., 2024).

Higher MHL also correlates with better help-seeking behaviors, particularly among parents and community health workers who influence youth mental health (Asl et al., 2024; Marthoenis et al., 2024; Paudel et al., 2024). Additionally, school-based MHL programs have been effective in increasing awareness and reducing stigma, particularly among female adolescents (Arnold et al., 2025; Grove et al., 2023). In the Philippines, the Health Promotion and Literacy Longitudinal Study (HPLS) found that 66.9% of Filipinos struggle to recognize depression, and only 18.2% of those suspecting a mental condition seek professional care. These figures highlight the urgent need for enhanced mental health education, especially among adolescents.Despite these advances, misconceptions about mental illness—such as beliefs that mental health conditions result from personal weakness—remain prevalent and continue to hinder effective intervention, particularly in low- and middle-income contexts (Marthoenis et al., 2024).

Although mental health literacy and dispositional optimism have been widely studied as separate constructs, research exploring their direct relationship remains scarce. Given that dispositional optimism enhances mental health, adaptive coping, and resilience (Nes & Segerstrom, 2016), It is still crucial to examine whether adolescents with greater MHL, who are more informed about mental health conditions and resources are also more likely to develop a positive and hopeful perspective toward their own well-being (Puig Oriol & Ramos Miranda, 2023; Uribe et al., 2021).

Furthermore, based on the reviews of the prior research, a notable population gap emerges. The gap concerning the age range of adolescents which has been under-researched in the prior literature leaves a void in our understanding of their unique experiences and perspectives. In addition, previous studies encompassed several unexplored dimensions that lately have attracted research attention. These dimensions encompass the role of sex in understanding mental health literacy and dispositional optimism. The key emphasis is whether dispositional optimism is dependent on mental health literacy and how the sex demographics affect on how mental health literacy and dispositional optimism is perceived.

Given the lack of empirical studies directly examining the relationship between mental health literacy and dispositional optimism among adolescents, this study aims to investigate their association among students at Argao National High School. Specifically, it seeks to assess the levels of mental health literacy and dispositional optimism, examine differences according to sex, and determine whether higher mental health literacy is associated with greater dispositional optimism.

The study also explores potential mediating or moderating factors influencing this relationship. Findings may provide valuable insights into how mental health literacy shapes adolescents' outlook on future outcomes and inform school-based interventions aimed at enhancing mental health awareness, positive coping mechanisms, and overall student well-being.

This study further seeks to determine whether significant differences exist in the levels of mental health literacy among adolescent students when they are categorized according to sex. It also examines whether dispositional

optimism significantly varies between male and female students. In addition, the study investigates the presence of a significant relationship between mental health literacy and dispositional optimism among adolescent students at Argao National High School.

METHODOLOGY

Research Design

This study employed a descriptive-correlational design to examine levels of Mental Health Literacy (MHL) and Dispositional Optimism (DO), compare those levels across sex, and test the relationship between the two variables among late-adolescent students (school year 2025-2026). No experimental manipulation was performed; measures were administered under standardized conditions and associations were analyzed using correlational statistics.

Respondents

Data were collected at Argao National High School (Canbanua, Argao, Cebu), a public secondary school chosen for its relevance to the study aims and warranted concern for adolescent mental-health resources and needs. The sample comprised 350 students (ages 15-19; late adolescents). Simple random sampling (lottery method) was used from the eligible student list to obtain a balanced sample by sex (175 male, 175 female). Inclusion criteria: aged 15-19 and currently enrolled at Argao National High School during the 2025-2026 school year. For minors, parental/guardian consent and student assent were secured as required.

Measures / Instruments

Mental Health Literacy. Measured with the 35-item Mental Health Literacy Scale (MHLS; O'Connor & Casey, 2015). Scores range 35-160; higher scores = higher literacy. Reported internal consistency of the MHLS is high ($\alpha \approx .87$).

Dispositional Optimism. Measured with the Life Orientation Test-Revised (LOT-R; Scheier, Carver, & Bridges, 1994). The LOT-R has 6 scored items (plus 4 fillers) on a 5-point Likert scale; total scores range ~6-30, with higher scores indicating greater optimism (reported $\alpha \approx .76$; test–retest $r \approx .79$).

No item adaptations were made because both instruments are validated for adolescent populations and appropriate for the study's cognitive level. Permissions to use the instruments were obtained.

Procedure

Pre-data collection steps included securing school approval, obtaining the eligible student list, preparing consent/assent forms, and coordinating with school personnel and a licensed psychometrician. Participants were notified in advance through assigned teachers.

Actual data collection was administered face-to-face at the school in a controlled, distraction-free environment with the psychometrician present to ensure standardized administration and to address procedural questions. Participants completed the MHLS and LOT-R; researchers checked booklets for completeness immediately after administration. All procedures complied with ethical protocols for research involving minors.

Data preparation & management

Collected responses were encoded, anonymized (no personally identifying information included in the quantitative dataset), and securely stored with access limited to the research team. Missing or invalid responses were logged for possible follow-up. After study completion and defense, raw data will be deleted per the project's confidentiality plan.

Statistical analysis

Analyses were performed using IBM SPSS Statistics (2023). Descriptive statistics (means, SDs, frequencies, percentages) summarized demographic variables and scale scores. Group differences by sex were tested using independent-samples t-tests ($\alpha = .05$) after checking assumptions (normality, homogeneity of variances). The relationship between MHL and DO was tested with Pearson's product-moment correlation coefficient (two-tailed, $\alpha = .05$). All assumption checks and decisions on test selection are documented in the data-analysis protocol.

Ethical consideration

The study followed APA ethical principles (respect for persons, beneficence, justice). Participation was voluntary; informed consent (or parental consent + participant assent for minors) was obtained. Measures to minimize harm included anonymization of data, culturally sensitive administration, non-identifying reporting, and availability of appropriate support if any participant experienced distress. Data confidentiality and secure storage were maintained throughout.

RESULTS AND DISCUSSIONS

Mental Health Literacy and Dispositional Optimism

To measure the levels of mental health literacy and dispositional optimism among selected Argao National High School students aged 15 to 19, Table 1 presents the mean scores, standard deviations, and descriptive levels of both variables, grouped by sex. This provides an overview of differences between male and female students in their understanding of mental health concepts and their general outlook on life. Since no standardized instrument measures both variables simultaneously, separate tools were used for each, and the results are analyzed independently.

Table 1:Mental Health Literacy and Dispositional Optimism Level

Sex	Mental Health Literacy			Dispositional Optimism		
	Mean	SD	Level	Mean	SD	Level
Male (175)	108.39	10.86	Moderate	22.37	5.40	High Optimism
Female (175)	114.59	11.61	Moderate	22.30	4.36	High Optimism

Mental Health Literacy Range:low (35–76.6), moderate (76.7–118.3), and high (118.4–160).

Dispositional Optimism Range: low optimism (high pessimism) (0-13), moderate optimism (14-18), and high optimism (low pessimism)(19-24).

Results indicate that female students scored slightly higher in mental health literacy (M = 114.59, SD = 11.61) than males (M = 108.39, SD = 10.86), with both groups falling at a moderate level. For dispositional optimism, males (M = 22.37, SD = 5.40) and females (M = 22.30, SD = 4.36) both showed high optimism, with males having a marginally higher mean score. These findings suggest moderate mental health knowledge and a generally positive outlook among students, regardless of sex

Mental Health Literacy and Dispositional Optimism Across Sexes (p-value)

Tables 2 and 3 present the comparison of mean scores of mental health literacy and dispositional optimism across sexes. The analysis determines whether significant differences exist between male and female respondents.

Table 2: Mental Health Literacy Across Sexes (p-value*)*

Sex	Mean	p value	Decision
Male (175)	108.39	0.000	Reject the null hypothesis.
Female (175)	114.59		

***p value < .05**

Table 2 shows that male respondents obtained a mean score of 108.39, while females obtained a higher mean score of 114.59. The p value of 0.000 is less than 0.05, indicating a significant difference in mental health literacy between male and female respondents, with females showing higher mental health literacy.

Table 3: Dispositional Optimism Across Sexes (p-value)

Sex	Mean	P value	Decision
Male (175)	22.37	0.983	Fail to reject the null hypothesis.
Female (175)	22.30		

***p value < .05**

Table 3 shows that male respondents obtained a mean score of 22.37, while females obtained 22.30. The p value of 0.983 is greater than 0.05, indicating no significant difference in dispositional optimism between male and female respondents.

Relationship between Mental Health Literacy and Dispositional Optimism

Table 4 presents the relationship between mental health literacy and dispositional optimism among students. Pearson correlation was used to determine the strength and significance of the relationship between the two variables across sexes.

Table 4: Mental Health Literacy & Dispositional Optimism

Respondents	r	p value	Decision
Male (175)	0.211	0.005	Weak but significant positive correlation
Female (175)	-0.022	0.768	Very weak and not significant
Overall (350)	0.097	0.071	Fail to reject the null hypothesis.

***p value < .05**

Table 4 results show a significant weak but positive correlation between mental health literacy and dispositional optimism among male respondents ($r = 0.211$, $p = 0.005$), indicating that higher mental health literacy was associated with a more optimistic outlook in males.

There was a significant relationship between mental health literacy and dispositional optimism among male respondents.

In contrast, there was no significant relationship between the two variables among female respondents ($r = -0.022$, $p = 0.768$), suggesting that optimism levels in females are not directly related to their mental health literacy. There was no significant relationship between mental health literacy and dispositional optimism among female respondents.

There was a very weak positive correlation (r = 0.097) between overall mental health literacy and dispositional optimism, which was not statistically significant (p = 0.071 > 0.05).

Therefore, the null hypothesis is not rejected, indicating that overall, there is no significant relationship between mental health literacy and dispositional optimism among the respondents.

DISCUSSION OF THE RESULTS

Sex-Based Differences in Mental Health Literacy and Optimism

The results indicated a significant difference in the level of mental health literacy when respondents were grouped according to sex, with a p-value of 0.000, which is less than the 0.05 level of significance. This finding led to the rejection of the null hypothesis (Ho_1) and the acceptance of the alternative hypothesis (Ha_1), which stated that there was a significant difference in the level of mental health literacy of adolescent students when grouped according to sex. However, female students demonstrated higher levels of mental health literacy than their male counterparts. This implied that sex is a significant factor influencing awareness and understanding of mental health concepts.

These findings are consistent with those of Cotton et al. (2006) and Swami (2018), who found that females tend to be more open to discussions about mental health and were more likely to seek help compared to males. From a theoretical perspective, this finding can also be interpreted through Bronfenbrenner's Ecological Systems Theory (1979), which highlighted how environmental and social systems influenced behavior. Female students might have received more emotional support from family and peers (microsystem influences) and are encouraged by cultural expectations (macrosystem influences) to express emotions openly. Unlike males, however, may be affected by societal norms that discouraged vulnerability, which could explain their slight lower level of mental health literacy compared to females.

Gender socialization also plays a key role. Females are often encouraged to express emotions and empathy, while males are influenced by societal norms that discourage vulnerability and help-seeking behavior (Rickwood et al., 2005). Variations between genders can be explained through socialization processes and gender roles (Eagly, Wood, & Diekman, 2000). Women are frequently socialized to engage in caregiving roles and exhibit greater sensitivity to the emotional states of others (Wood et al., 1989). Conversely, men are typically less inclined to express emotions openly and less responsive to internal emotional experiences (Wood et al., 1989). These patterns also contribute to women reporting affective disorders, such as depression, more frequently than men and experiencing emotions with greater intensity (Bradburn, 1969; Kessler, Brown, & Broman, 1981). In this study, the heightened emotional expressiveness and reliance on environmental support among females may explain their higher scores in mental health literacy compared to male students.

Conversely, no significant difference was found in dispositional optimism between male and female respondents, with a p-value of 0.983 (> 0.05). Therefore, the null hypothesis (Ho_2) was accepted, suggesting that optimism is relatively stable across genders. This finding aligns with Positive Psychology Theory (Seligman & Csikszentmihalyi, 2000), which views optimism as a universal strength contributing to human flourishing. Regardless of sex, adolescents can cultivate positive expectations and resilience, reflecting optimism's role as a key psychological resource for well-being.

This outcome also supports Scheier and Carver's (1985) theoretical framework, which posits that dispositional optimism is a stable personality trait rooted in generalized expectations for positive outcomes rather than demographic factors. Similarly, Conversano et al. (2010) reported that optimism is shaped more by individual coping mechanisms and life experiences. Therefore, both male and female adolescents in this study exhibited comparable, high levels of optimism toward life challenges and future expectations.

Weak Overall Correlation Between Mental Health Literacy and Optimism

The overall correlation between mental health literacy and dispositional optimism among adolescents in Argao National High School **(**ANHS) was found to be very weak and statistically insignificant (p=0.071>0.05),

indicating that mental health literacy does not generally predict optimism in this sample. significant ($p=0.071>0.05$). Hence, the null hypothesis (Ho_3) stating that there is no significant relationship between mental health literacy and dispositional optimism among adolescent students was accepted for the overall sample.

This finding supports Corey Keyes' Dual Continuum Model of Mental Health and Mental Illness (2002), which posits that mental health and mental illness are distinct but related dimensions. The weak correlation suggests that having knowledge about mental health does not necessarily lead to flourishing or high optimism, as well-being also depends on emotional, social, and environmental factors beyond knowledge alone. Sánchez et al. (2020) observed similar results, noting that while MHL enhances awareness and reduces stigma, optimism is shaped more by personal attitudes, coping mechanisms, and psychological resilience.

When the results were broken down by sex, more specific patterns appeared. Although the overall sample showed no significant relationship, male respondents exhibited a weak but statistically significant positive correlation between MHL and dispositional optimism. This suggests that male students may benefit more from mental health knowledge, as traditional socialization often discourages emotional expression in boys. Greater understanding of mental health may help them interpret experiences more positively and adopt effective coping strategies, slightly increasing optimism. In contrast, female students, who already demonstrate higher levels of emotional awareness, did not show this correlation, indicating that additional MHL does not significantly change their disposition. This male-specific finding is novel and highlights a unique contribution of the study.

The school context at Argao National High School (ANHS) is also relevant. Limited formal mental health education may contribute to generally low MHL levels and the weak overall correlation with optimism. Male students may rely more on self-directed learning of MHL to navigate psychological challenges in the absence of structured support, which could explain the observed correlation. Females, benefiting from informal social support and greater emotional expressiveness, may be less affected by the lack of formal programs. This underscores the importance of situating the findings within the school environment, as access to resources and educational programs can influence how knowledge translates into optimism.

Male-Specific Correlation and Theoretical Explanation

A significant positive correlation was observed among male students ($r = 0.211$, $p = 0.005$), indicating that higher mental health literacy (MHL) is associated with higher dispositional optimism. In contrast, female students showed no significant relationship ($r = -0.022$, $p = 0.768$).

Carver and Scheier's Self-Regulation Theory (1981) helps explain this finding. Optimism facilitates emotion regulation and motivation, enabling individuals to manage challenges more effectively. For male students, MHL may serve as a cognitive tool to understand and cope with mental health challenges, providing a safe, intellectual pathway to optimism. Traditional masculine norms often discourage emotional vulnerability, so knowledge-based strategies may allow males to process and regulate emotions without confronting these societal pressures directly. For females, whose MHL is already relatively high, optimism appears to be influenced more by self-esteem, peer support, and perceived control rather than additional knowledge.

Bandura's Social Cognitive Theory (1991) and the Bidirectional Relationship Theory (1986) further clarify why the overall correlation between MHL and optimism is weak. Dispositional optimism is shaped by the dynamic interaction of cognitive, environmental, and behavioral factors. Adolescents may possess mental health knowledge yet still experience fluctuating optimism due to stressors, social expectations, and self-identity development. Thus, the relationship between MHL and optimism is likely reciprocal but moderated by multiple environmental and psychological factors.

CONCLUSION

The study revealed that sex significantly influenced mental health literacy, with females scoring higher, but did not affect dispositional optimism, which remained stable across genders. While the overall relationship between mental health literacy and optimism was weak and insignificant, a significant positive correlation was observed among male students, suggesting that improved mental health understanding may foster optimism specifically in males. These findings guided

the design of Project Mind & Hope, offering targeted literacy enhancement for males, maintenance for females, and strategies to sustain optimism, build resilience, and develop emotional regulation. The results highlight that mental health literacy and optimism operate through distinct mechanisms, and promoting adolescent well-being requires combining knowledge with emotional competence, adaptive coping, and supportive social contexts. Schools and communities should therefore implement interventions that integrate education with strategies fostering positive thinking and psychological resilience for all students.

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